

In the Claims:

1-15. (Cancelled)

16. (Currently Amended) A method of forming a semiconductor device, the method comprising:

forming a gate electrode on a region in a substrate, the region in the substrate having a first conductivity type;

forming a notched spacer alongside the gate electrode such that a thickness of the notched spacer alongside the gate electrode is thinner near the substrate, the notched spacer comprising a single homogenous layer;

performing a first ion implant wherein only the gate electrode and the notched spacer act as masks during the first ion implant, the first ion implant using ions of the first conductivity type; and

performing one or more second ion implants using ions of a second conductivity type.

17. (Previously Presented) The method of claim 16, wherein the step of forming a notched spacer comprises forming a first layer and a second layer, forming a mask out of the second layer on the first layer such that the first layer alongside the gate electrode is covered by the mask, etching the first layer such that the first layer along a surface of the substrate next to the gate electrode is removed, and removing the mask.

18. (Original) The method of claim 17, wherein the mask is formed of silicon nitride.

19. (Original) The method of claim 17, wherein the mask is formed of silicon oxide.

20. (Original) The method of claim 16, wherein the step of performing a first ion implant is performed by implanting ions at an oblique angle to the substrate such that impurities of the first conductivity type are implanted in the substrate below the gate electrode.

21. (Previously Presented) The method of claim 16, wherein the step of performing one or more second ion implants is performed at an angle normal to a surface of the substrate.

22. (Original) The method of claim 16, wherein the notched spacer is formed of silicon dioxide.

23. (Original) The method of claim 16, wherein the notched spacer is formed of silicon nitride.

24. (Currently Amended) A method of forming a semiconductor device, the method comprising:

forming a gate electrode in a region on a substrate, the region of the substrate having a first conductivity type;

forming a first layer over the substrate and the gate electrode;

forming a second layer over the first layer;

removing a portion of the second layer such that a spacer mask is formed on the first layer on a side of the gate electrode;

etching the first layer to form a notched spacer wherein the spacer mask acts as a mask,
and wherein the etching process removing removes at least a portion of the first layer along a surface of the substrate, thereby forming a notch in the notched spacer alongside the gate

electrode near the substrate;
removing the spacer mask;
performing a first ion implant after the spacer mask has been removed, the first ion implant using ions of the first conductivity type; and
performing one or more second ion implants using ions of a second conductivity type.

25. (Original) The method of claim 24, wherein the step of performing a first ion implant is performed by implanting ions at an oblique angle to the substrate such that impurities of the first conductivity type are implanted in the substrate below the gate electrode.

26. (Original) The method of claim 24, wherein the step of performing one or more second ion implants are performed at an angle normal to the surface of the substrate.

27. (Original) The method of claim 24, wherein the first layer is formed of silicon dioxide.

28. (Original) The method of claim 24, wherein the second layer is formed of silicon nitride.

29. (Withdrawn-Currently Amended) A method of forming a semiconductor device, the method comprising:

forming a gate electrode on a region in a substrate, the region in the substrate having a first conductivity type;

forming a first layer over the substrate and the gate electrode;

forming a second layer over the first layer;

removing a portion of the second layer such that a spacer mask is formed on the first layer on a side of the gate electrode;

etching the first layer to form a notched spacer wherein the spacer mask acts as a mask, the etching removing substantially all of a portion of the first layer along a surface of the substrate adjacent the gate electrode;

removing the spacer mask;

performing a first ion implant after the spacer mask has been removed, the first ion implant using ions of the first conductivity type; and

performing one or more second ion implants using ions of a second conductivity type.

30. (Withdrawn) The method of claim 29, wherein the step of performing a first ion implant is performed by implanting ions at an oblique angle to the substrate such that impurities of the first conductivity type are implanted in the substrate below the gate electrode.

31. (Withdrawn) The method of claim 29, wherein the step of performing one or more second ion implants are performed at an angle normal to the surface of the substrate.

32. (Withdrawn) The method of claim 29, wherein the first layer is formed of silicon dioxide.

33. (Withdrawn) The method of claim 29, wherein the second layer is formed of silicon nitride.